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(54) Title: METHOD OF PROCESSING AND STORING MASS SPECTROMETRY DATA

(57) Abstract: A data compression technique is disclosed for Fourier Transform Mass Spectrometry (FTMS). A statistical analysis is applied to the data in the frequency domain since most of this data is a result of randomly distributed electronic noise. A fit of the whole frequency dataset to the distribution is made to determine preliminary moments of the distribution. The data in the tail of that distribution (which is mainly the peak data) is then removed and the remaining data points are re-fitted to the distribution, to identify the moments of distribution of that remaining noise data. A noise threshold for the mass spectrum is then applied using the calculated moments. The data above the threshold is kept. The whole spectrum can be reconstituted by storing the moments of distribution along with the peak data and then regenerating the noise from those moments and adding it to the peak data.